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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,233	12/19/2000	Frank L. Berry	219.38575X00	4418
7590 12/03/2004			EXAMINER	
Christopher K. Gagne c/o Blakely, Sokoloff, Taylor & Zafman LLP 12400 Wilshire Boulevard, Seventh Floor Los Angeles, CA 90025			JEAN, FRANTZ H	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/739,233

Applicant(s)

BERRY, FRANK L.

Examiner

Frantz B. Jean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 31-60 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 31-60 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/24/04 has been entered.

The drawing filed on 9/24/04 has been accepted by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-33 and 36-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avery US PUB. NO. 2004/0015622 in view of Garcia et al. (US patent NO. 6,163,834).

As per claim 31, Avery teaches a method comprising:

in response to receiving a memory access request comprising a virtual address and a key entry, locating a region in a translation and protection table (TPT), the region being associated with a region entry (par 0031);

validating access to the region by comparing a first key field to a second key field, the first key field associated with the key entry, and the second key field associated with the region entry (par 0031, 0051; fig 8A; Avery

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discloses a host channel adapter that maintains a translation and protection table that it uses to perform address translations and validates access rights to the memory). Avery teaches access validation and memory access request. However, Avery does not explicitly detail on region type field of a region entry. Garcia discloses that each Memory Handle Table entry comprises TPT Start and TPT Extent fields to distinguish between regions (col. 4 lines 17 et seq). It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined Garcia features to Avery because it would have avoided duplication of translation operations while responding to memory access request.

As per claim 32, Avery teaches the method of claim 31, wherein said locating a region in the TPT is based on art index field of the key entry (par 0051, a remote key field is used to select appropriate pages for TPT address translations).

As per claim 33, Avery teaches the method of claim 31, wherein access to the region is validated if the first key field matches the second key field (col. 3 lines 66 to col. 4; col. 4 lines 46 et seq).

A per claim 36, Avery teaches the method of claim 31, wherein the region type field of the region entry comprises one of a local region and a bindable region, and wherein said responding to the memory access request comprises: locating a translation entry associated with the memory access request based on the virtual address, a translation handle associated with the region entry, and page size associated with the region entry; validating access to the translation entry; and determining a physical page address corresponding to the virtual address based on the translation entry (col. 4 lines 17 et seq).

As per claims 37, 45, 50 and 56, Avery teaches a method comprising: in response to receiving a memory access request (par 0031 and 0051) comprising a virtual address, locating a region in a translation and protection table (TPT) associated with the memory access request; validating access to the region at a region level, and to one of the one or more translation entries at a translation entry level, the one translation entry corresponding to the memory access request (par 0031, 0051); if access to the region and translation entry is validated, determining a physical address corresponding to the virtual address (see fig 7-8B); memory (306); network interface card (see par 0032). However, Avery does not teach translation and protection table that includes a region entry which correspond to one or more translation entries. Garcia teaches a two level memory region registration and address translation system and method including a memory handle table, translation and protection table (TPT) (see abstract. The translation and protection table comprise pluralities of translation entries and at least a region entry, wherein said region entry comprises multiple level entries (col. 4 lines 17 et seq). It would have been obvious to one of ordinary skill in the art to have combined Garcia to Avery in order to avoid duplication of translation operations.

All the other limitations regarding the remaining dependent claims 38-44, 46-49, 51-55 and 57-60 are thought by the combination Avery and Garcia (see Avery par 0031 et seq and 0051 et seq and Garcia col. 4 lines 17 et seq).

***Response to Arguments***

Examiner believes that Avery in combination with Garcia teaches all the limitation of the claimed invention. Therefore, the prior art are maintained. Furthermore, Examiner request that applicant consider the references mentioned on the 892's form when responding to this office action because they strongly pertain to the claimed invention.

***Allowable Subject Matter***

Claims 34-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz B. Jean whose telephone number is 571-272-3937. The examiner can normally be reached on 8:30-6:00 M-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571 272 3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz Jean

A handwritten signature in black ink, appearing to read "Frantz", with a stylized flourish extending from the end.

**FRANTZ B. JEAN  
PRIMARY EXAMINER**